

METHODS AND APPARATUS FOR FORMING ANASTOMOTIC SITES

ABSTRACT OF THE DISCLOSURE

Apparatus and methods are provided for forming a working space on the
5 interior wall of a blood vessel, such as the aorta. The working space is isolated from blood
flow and permits creation of an anastomotic hole and subsequent suturing of the hole to form
an end-to-side anastomosis, even while the heart is beating. The apparatus comprises tools
including inflatable barriers, such as cup-shaped balloons, which engage the inner wall of the
blood vessel with minimum trauma and maximum sealing. In a first embodiment, the
10 inflatable barrier is introduced through a penetration at the site of the anastomotic attachment.
In a second embodiment, the inflatable barrier is introduced through a second penetration
axially spaced-apart from the site of the anastomotic attachment.

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